DOCUMENT RESUME

ED 241 522 SP 024 008

AUTHOR Marty, Phillip J.; McDermott, Robert J.
TITLE Utility of Pamphlets in Promoting Knowledge and Positive Attitudes about Two Early Cancer Detection Procedures.
PUB DATE [83]
NOTE 16p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attitude Change; *Cancer; *College Students; Health Education; Higher Education; *Instructional Systems; *Knowledge Level; *Pamphlets; Program Effectiveness; Student Attitudes; Teaching Methods
IDENTIFIERS Breast Examination; *Self Examinations (Physical); Testicular Examination

ABSTRACT

Informational pamphlets about breast self-examination (BSE) and testicular self-examination (TSE) are widely distributed in health care settings, but the pamphlets' effectiveness in promoting knowledge and positive attitudes about these early cancer detection procedures is largely unknown. A study compared pamphlets with alternative methods of information delivery about BSE and TSE. Subjects were 219 females and 157 males enrolled in a health science course at a midwestern university. Female subjects were randomly assigned to BSE pamphlet, modeling, or modeling with guided practice groups. Male subjects were randomly assigned to TSE pamphlet group or to one of two alternative facilitator-conducted groups. Knowledge and attitudes about BSE and TSE were post-tested upon completion of the 60-minute programs. Groups did not differ with respect to knowledge about the respective early detection procedures, but more favorable responses in the facilitator-conducted programs did occur among groups in both BSE and TSE programs regarding selected attitudes. It was concluded that pamphlets may be the simplest, most cost-effective information delivery mode when knowledge gain is the sole educational program objective. However, attitudinal change may require that more person-oriented approaches be taken by health professionals in educational roles. (Author/JMK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED241522

UTILITY OF PAMPHLETS IN PROMOTING KNOWLEDGE AND POSITIVE ATTITUDES ABOUT TWO EARLY CANCER DETECTION PROCEDURES

Phillip J. Marty, Ph.D.
(Corresponding Author)
Program Coordinator
Health Education Program
University of Arkansas
Fayetteville, Arkansas 72701

Robert J. McDermott, Ph.D.
Assistant Professor of Health Education
Department of Health Education
Southern Illinois University
Carbondale, Illinois 62901

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Philip J. Marty
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

SP024008

ABSTRACT

Breast self-examination (BSE) and testicular self-examination (TSE) are useful adjuvants for the early detection of these respective types of cancer. Informational pamphlets about these two procedures are widely distributed in health care settings. Their effectiveness in promoting knowledge and positive attitudes about these early detection procedures is largely an unknown quantity, however. A study was undertaken to compare pamphlets with alternative methods of information delivery about BSE and TSE. The sample of 219 females and 157 males was drawn from a health science course of a midwestern university. Female subjects were randomly assigned to BSE pamphlet, modeling, or modeling with guided practice groups. Male subjects were randomly assigned to a TSE pamphlet group or to one of two alternative facilitator-conducted groups. Knowledge and attitudes about BSE and TSE were post-tested upon completion of the 60-minute programs. Groups did not differ with respect to knowledge about the respective early detection procedures ($p=.05$), but more favorable responses in the facilitator-conducted programs did occur among groups in both BSE and TSE programs regarding selected attitudes ($p<.05$). It is concluded that pamphlets may be the simplest, most cost-effective information delivery mode when knowledge gain is the sole educational program objective. However, attitudinal change may require that more person-oriented approaches be taken by health professionals in educational roles.

INTRODUCTION AND PURPOSE

The use of pamphlets is a frequent and popular means of transmitting educational messages in a variety of instructional and clinical settings.[1] The effectiveness of this information dissemination method in promoting knowledge and positive attitudes about health issues has received some attention in the literature. However, the value of its received some attention in the literature. However, the value of the application of pamphlets to specific areas of health concern is largely an unknown some use and attention is in educating individuals about self-examination procedures for the early detection of cancer. The American Cancer Society has two such sets of pamphlets which help inform individuals about breast cancer and breast self-examination, and testicular cancer and testicular self-examination.[3-6] Both self-examination procedures have received varying degrees of attention regarding their value in the early diagnosis of cancer.[7-11] Efforts to identify strengths and weakness of the use of pamphlets in informing individuals about these early detection techniques have important implications for professionals and organizations who provide the majority of educational programs on self-examination procedures. Ultimately, identifying such strenghts and weaknesses can assist program planners to better design and improve the effectiveness of educational programs. The purpose of this study was to identify the impact of pamphlets against alternative methods of information delivery in promoting knowledge and positive attitudes about cancer self-examination/early detection procedures presently being suggested for male and female populations. The two cancer self-examination/early detection procedures included: 1) breast self-examination (BSE), and 2) testicular self-examination (TSE).

METHODS

Female Sample and Breast Self-Examination

The sample for this aspect of the study utilized 219 female subjects from a health science course at a midwestern university during the fall of 1980. Subjects were randomly assigned to one of three educational programs which included:

A) An educational program which exposed participants to American Cancer Society pamphlets containing information about breast disease and BSE practice (pamphlets only group).

B) An educational program conducted by a facilitator in which breast disease was discussed and BSE modeled for participants (modeling only group)

C) An educational program conducted by a facilitator which exposed participants to the features of the modeling program, with the added aspect of individualized guided practice performed over the clothing (modeling and guided practice group).

Each program was designed to last approximately sixty minutes. Members of the "pamphlet only" group were asked to read and study carefully two pamphlets on breast cancer and BSE. The "modeling only" group, received information from a facilitator, provided by the same two pamphlets used in the pamphlets only group. After providing a verbal description of BSE, the facilitator simulated BSE over her own clothing, with a subsequent demonstration on a breast model. The "modeling and guided practice" group received an identical program, with the added feature of BSE performed over the clothing by the subjects. Subjects were then provided with performance feedback on an individual basis by the facilitator.

Male Sample and Testicular Self-Examination

The sample for this aspect of the study utilized 157 male subjects from a health science course at a midwestern university during the fall of 1980. Subjects were randomly assigned to one of three educational programs which included:

A) An educational program which exposed participants to American Cancer Society fact sheets containing information about testicular cancer and the practice of TSE (pamphlets only group).

B) A facilitator conducted educational program in which the facilitator discussed testicular cancer and demonstrated TSE with the aid of a diagram (facilitator group).

C) An educational program conducted by a testicular cancer patient-facilitator volunteer who discussed his personal medical history with program participants (patient-volunteer group).

Each program was designed to last approximately sixty minutes. Members of the "pamphlets only" group were directed to read and carefully study two pamphlets on testicular cancer and TSE. The content received by the facilitator group was based on the same two pamphlets used in the pamphlets only group. The patient-volunteer group received similar content, but in addition, was provided with the patient's personal medical history of detection, diagnosis, and treatment.

DESIGN, MEASUREMENTS AND ANALYSES

The design utilized in this study was a modified posttest only, comparison group design. A posttest was used in each group to assess attitudes with respect to such things as susceptibility and severity beliefs about breast cancer or testicular cancer, the benefit of BSE or TSE, and the relative merits of the various alternative approaches

for conveying information about BSE or TSE as an early detection procedure. Likert-type scales were employed for each of the respective group inventories. Subjects in each group also completed a 25-item knowledge inventory on breast cancer/BSE, or testicular cancer/TSE developed by the investigators. Statistical techniques included analysis of variance (ANOVA) for results of each of the knowledge inventories. Attitudinal differences on each of the respective attitudes inventories were examined using chi square.

RESULTS

Pamphlets and Breast Self-Examination

One of the primary objectives of this study was to determine whether the use of pamphlets addressing breast cancer and breast self-examination were as or more effective in enhancing the knowledge retained by participants in an educational program when compared to alternative information delivery methods. Analysis of participant knowledge test results by ANOVA revealed no statistically significant differences among the three groups regarding knowledge retention.

Another objective of this study was to determine if statistically significant differences in attitudes about BSE practice developed as a result of varying the educational sessions. Data in Table I reveal that participants differed in their perceived value of the benefit of BSE. The group exposed to modeling and guided practice was most likely to indicate that BSE had "great benefit" ($p < .01$).

Another area of difference among the three groups occurred in perceived beneift of the educational programs. As indicated by the data in Table II, the group expsoed to both modeling and guided practice was most likely to report its learning experience had "great benefit" ($p < .001$).

Pamphlets and Testicular Self-Examination

Another primary objective of this study was to determine whether the use of pamphlets addressing testicular cancer and testicular self-examination was as or more effective in enhancing the knowledge retained by participants in an educational program when compared to alternative information delivery methods. A 25-item knowledge inventory was used to measure knowledge retained by participants in their respective testicular cancer/TSE programs. The mean raw scores for the 3 groups on the inventory were: pamphlet only group = 21.8; facilitator group = 21.3; patient-volunteer group = 20.1. The data in Table III indicate significant differences were found among the three means ($p < .002$). The Bonferroni Multiple Comparisons Test was applied to determine where the differences occurred. It was found that both the pamphlets only group and the facilitator group performed better on the knowledge inventory than the patient-volunteer group.

Another objective of this study was to determine if significant differences in beliefs about the nature of testicular cancer and attitudes toward TSE developed as a result of varying the educational sessions. With respect to subjects' perceived susceptibility to testicular cancer, results of the chi square analysis indicated no significant differences among groups. However, when analysis was applied to the data related to subjects' perceived benefit of performing TSE on a monthly basis, significant differences were found ($p < .02$). The data in Table IV demonstrate that both the facilitator group and the patient-volunteer group perceived greater benefit from performing monthly TSE than the pamphlets only group.

Another area of difference among the 3 groups occurred in satisfaction with the educational sessions. As indicated by the data in Table V, members of the facilitator and patient-volunteer groups were more likely to express high level satisfaction with learning about TSE than were members of the pamphlets only group ($p < .05$).

DISCUSSION

The results of this inventigation point to some important observations about educational programs attempting to promote the practice of BSE and TSE. As indicated by the results of the knowledge inventory, none of the programs emerged as particularly superior. Interestingly, inferior results on the TSE knowledge inventory were identified in the TSE patient-volunteer group. Why this occurred is unclear, however the patients' medical history may have served to distract the participants, thus reducing cognition.

Findings from this aspect of the study seem to indicate that when transfer of knowledge about cancer self-examination/early diagnosis procedures is the principal objective of an educational program, the use of pamphlets may be the simplest, most cost-effective, and time-efficient strategy. This belief rests, however, on the assumption that persons can and will read pamphlets when given the opportunity in non-investigative settings.

In regards to differences in attitudes among participants in the various educational programs, important differences existed. The educational programs carried out by a "facilitator" appeared generally superior in promoting the benefits of performing BSE or TSE than the programs in which only pamphlets were used. Proponents of the Health

Belief Model have identified "perceived benefit" of a preventive practice as an important determinant of eventual health behavior.[12]

Furthermore, subjects in "facilitator conducted" groups generally reported higher levels of satisfaction with their learning experiences compared to persons whose only educational exposure was to pamphlets. Since health service satisfaction level is linked by some investigators with level of compliance to an early detection procedure, the practitioner who is inclined merely to tell his or her patients or clients to read a BSE or TSE pamphlet may be advised to allocate additional time to teach patients directly about BSE or TSE procedures.[13] This investigation supports the notion that pamphlet reading is not as good of a motivator of attitudinal change about the benefits of an early detection procedure as are more person-oriented methods, nor is pamphlet reading a particularly satisfying health learning experience for people. If time consuming innovations related to cancer education in medical practice would be rejected by the majority of physicians, as some authorities in the field suggest, then the argument can and should be advanced that such innovations need to be made by other professionals such as nurses, health educators, and health counselors, whose efforts reinforce and supplement those of physicians.[14] However, evidnece provided by this study does support the notion that pamphlets can have a positive effect on self-examination procedures when used appropriately in clinical settings. When considering the development of educational programs, the use of pamphlets which represent a cost effective and easy method of information delivery, providing a clear understanding of assiciated strengths and weaknesses is understood, should not be overlooked when designing and implementing

such programs addressing self-examination procedures for men and women. Findings from this study, suggest that programs using pamphlets can have an important impact on the acquisition of knowledge about BSE or TSE, and thus have some positive benefit to subsequent self-examination practice when efficiency and minimal resources are available to the educational planner.

References

1. Green LW, Krueter MW, Deeds SG, Partridge KB: Health Education Planning: A Diagnostic Approach. Palo Alto, CA, Mayfield Publishing Company, 1980.
2. Ross HS, Miro PR: Theory and Practice in Health Education. Palo Alto, CA, Mayfield Publishing Company, 1980.
3. American Cancer Society: Facts on breast cancer. New York, American Cancer Society, 1980.
4. American Cancer Society: How to examine your breasts. New York, American Cancer Society, 1979.
5. American Cancer Society: Facts on testicular cancer. New York, American Cancer Society, 1978.
6. American Cancer Society: How to examine your testes. New York, American Cancer Society, 1978.
7. Foster RS, Lange SP, Costanza JK, et al. Breast self-examination practices and breast cancer stage. N Engl J Med 1978; 299:265-270.
8. Greenwald P, Nasca PC, Lawrence CE, et al: Estimated effect of breast self-examination and routine physical examinations on breast cancer mortality. N Engl J Med 1978; 299:271-273.
9. Cole P, Austin H. Breast self-examination: An adjuvant to early cancer detection. Am J Public Health 1981; 71: 583-590.
10. Marty PJ, McDermott RJ. Teaching about testicular cancer and testicular self-examination. J School Health 1983; 53:351-356.

11. Garnick MB, Mayer RJ, Richie JP. Testicular self-examination. N Engl J Med 1980; 302:297.

12. Becker MH: Personal health behavior and the health belief model. Thorofare, JS, C.B. Slack, Inc., 1974.

13. Hill DJ, Gardner GJ, Carson NE, et al. General practitioners in cancer education. Aust Fam Physician 1977; 6:1295-1298.

14. Hill DJ, Carson NE, Gardner GJ, et al. Simple health education about breast cancer in general practice. Int J Health Educ 1979; 22:25-29.

TABLE I

Perceived value of BSE among groups (n = 219)

	Pamphlets only	Modeling only	Modeling and guided practice
Great benefit	42 (58%)	44 (65%)	66 (84%)
Moderate benefit	28 (39%)	21 (31%)	13 (16%)
Little or no benefit	2 (3%)	3 (4%)	0

Chi square = 13.94 $p < .01$ df = 4

TABLE II

Perceived benefit of BSE educational interventions (n = 216)*

	Pamphlets only	Modeling only	Modeling and guided practice
Great benefit	20 (28%)	27 (40%)	49 (63%)
Moderate benefit	39 (55%)	33 (49%)	28 (36%)
Little or no benefit	12 (17%)	7 (11%)	1 (1%)

Chi Square = 23.45 $p < .001$ df = 4

*Three missing cases

TABLE III

ANOVA regarding TSE knowledge inventory performance (n = 157)

Source of variation	DF	SS	MS	F-ratio
Between groups	2	76.6	38.3	6.8*
Within groups	154	865.3	5.6	
TOTAL	156	941.9		

*F-ratio exceeds the .002 level of statistical significance

TABLE IV

Perceived value of BSE among groups (n = 152)*

	Pamphlets only	Facilitator	Patient-Volunteer
Great benefit	23 (48%)	40 (70%)	37 (79%)
Moderate benefit	22 (46%)	16 (28%)	10 (21%)
Little or no benefit	3 (6%)	1 (2%)	0

Chi square = 12.40 $p < .02$ df = 47

*Five missing cases

TABLE V

Satisfaction with TSE educational programs among groups (n = 147)*

	Pamphlets only	Facilitator	Patient-Volunteer
Greatly satisfied	21 (47%)	30 (54%)	35 (75%)
Moderately satisfied	21 (47%)	24 (44%)	12 (25%)
Not satisfied	3 (6%)	1 (2%)	0

Chi square = 10.50 $p < .05$ df = 4

*10 missing cases